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The Production of Dry Powder by the Sonocrystallisation for Inhalation Drug Delivery

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ABSTRACT

An anti-solvent sonocrystallisation technique was applied for the production of salbutamol sulphate fine particles for the dry powder inhaler (DPI) formulations. The effects of process variables, namely sonication power (watt, W) and volume ratio of anti-solvent to solute solution on the particle characteristics of salbutamol sulphate were investigated. Depending on process variables, fine particles of salbutamol sulphate with a size distribution in a range of 2 μm to 5 μm were successfully produced. Spray drying of sonocrystallised anti-solvent suspension produced micron size crystalline salbutamol

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